

Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (Pf 54175)  
 Page 2 of 18

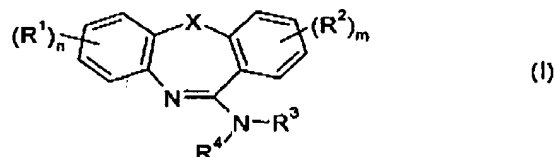
### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

Claims 1-9 (Canceled)

Claim 10 (Currently amended): A method for combating or controlling insects, arachnids or nematodes comprising contacting an insect, arachnid or nematode or their food supply, habitat or breeding grounds with a pesticidally effective amount of at least one compound of formula I or a composition comprising at least one compound of formula I:



wherein

X is sulfur, oxygen, sulfinyl (S=O), sulfonyl (SO₂), NR<sup>a</sup>, or CR<sup>b</sup>R<sup>c</sup>;

R<sup>a</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, or C<sub>2</sub>-C<sub>6</sub>-alkynyl, wherein the carbon atoms in these groups may be substituted by 1 to 3 groups R<sup>#</sup> wherein

R<sup>#</sup> is halogen, cyano, nitro, hydroxy, mercapto, amino, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonylamino, carboxyl, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>2</sub>-C<sub>6</sub>-alkenyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, or C<sub>1</sub>-C<sub>6</sub>-alkylthio;

phenyl or benzyl, each unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3 C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-haloalkylthio, C<sub>1</sub>-C<sub>6</sub>-alkoxy or C<sub>1</sub>-C<sub>6</sub>-haloalkoxy groups;

R<sup>b</sup>, R<sup>c</sup> are each independently hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>1</sub>-C<sub>6</sub>-hydroxyalkyl, wherein the carbon atoms in these

Application No.: 10/539,643  
Amdt. Dated: April 28, 2006  
Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
Page 3 of 18

groups may be substituted by 1 to 3 groups  $R^{\#}$ , or

phenyl, unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl,  $C_1$ - $C_6$ -alkoxy or  $C_1$ - $C_6$ -haloalkoxy groups, or

$CR^bR^c$  represents  $C=O$  or  $C=CR^jR^k$ , wherein  $R^j$  and  $R^k$  each independently are hydrogen, halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl, or  $C_3$ - $C_6$ -cycloalkyl;

$R^1, R^2$  are each independently halogen, hydroxy, mercapto, amino, cyano, nitro,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy,  $C_1$ - $C_6$ -alkylamino, di( $C_1$ - $C_6$ -alkyl)amino,  $C_1$ - $C_6$ -alkylthio,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkenyloxy,  $C_2$ - $C_6$ -alkenylamino,  $C_2$ - $C_6$ -alkenylthio,  $C_2$ - $C_6$ -alkynyl,  $C_2$ - $C_6$ -alkynyloxy,  $C_2$ - $C_6$ -alkynylamino,  $C_2$ - $C_6$ -alkynylthio,  $C_1$ - $C_6$ -alkylsulfonyl,  $C_1$ - $C_6$ -alkylsulfoxyl,  $C_2$ - $C_6$ -alkenylsulfonyl,  $C_2$ - $C_6$ -alkynylsulfoxyl, formyl,  $C_1$ - $C_6$ -alkylcarbonyl, hydroxycarbonyl,  $C_1$ - $C_6$ -alkoxycarbonyl, carbonyloxy,  $C_1$ - $C_6$ -alkylcarbonyloxy, phenyloxy,  $C_1$ - $C_6$ -alkylcarbonylamino,  $C(O)NR^dR^e$ , or  $(SO_2)NR^dR^e$ , wherein the carbon atoms in the aliphatic and aromatic groups may be substituted by 1 to 3 groups  $R^{\#}$  and wherein  $R^d$  and  $R^e$  are each independently groups as listed for  $R^{\#}$ ; or

$C(=NOR^f)-G_p-R^f$ , wherein  $R^f$  and  $R^f$  are each independently hydrogen or  $C_1$ - $C_6$ -alkyl,  $G$  is oxygen, sulfur or  $NR^f$  and  $p$  is 0 or 1; or

a mono- or bicyclic 5- to 10-membered aromatic ring system which may contain 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen and which is unfused or fused to the aromatic group to which it is bonded and which, when unfused, is bonded directly or through an oxygen, sulfur,  $C_1$ - $C_6$ -alkyl, or  $C_1$ - $C_6$ -alkoxy linkage, and which is unsubstituted or substituted with any combination of 1 to 5 groups  $R^{\#}$ ; or

$C_3$ - $C_{12}$ -cycloalkyl, which is bonded directly or through an oxygen, sulfur or  $C_1$ - $C_6$ -alkyl linkage, and which is unsubstituted or substituted with any combination

Application No.: 10/539,643  
Amdt. Dated: April 28, 2006  
Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
Page 4 of 18

of 1 to 5 groups  $R^d$ ;

$R^3, R^4$  are each independently hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl,  $C_1$ - $C_6$ -alkylamino,  $C_1$ - $C_6$ -alkoxy,  $C_3$ - $C_6$ -cycloalkyl, wherein the carbon atoms in these groups may be substituted with any combination of 1 to 3 groups  $R^e$ , or  $C(O)R^g$ ,  $C(O)NR^hR^i$ , or  $C(S)NR^hR^i$ ,

$R^g$  is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -alkoxy, or

phenyl or benzyl, each unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl,  $C_1$ - $C_6$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_1$ - $C_6$ -alkoxy or  $C_1$ - $C_6$ -haloalkoxy groups;

$R^h, R^i$  are each independently groups as listed for  $R^a$ ;

or  $R^3$  and  $R^4$  together with the nitrogen atom to which they are attached form a saturated or partially saturated mono- or bicyclic 5- to 10-membered ringsystem containing 1 to 3 heteroatoms selected from nitrogen and oxygen or 5-membered heteraryl containing 1 to 4 nitrogen atoms, wherein the carbon and/or nitrogen atoms in the saturated, partially saturated or aromatic rings are unsubstituted or substituted with any combination of 1 to 4 groups selected from amino,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl,  $C_1$ - $C_6$ -alkoxy,  $C_2$ - $C_6$ -alkenyloxy,  $C_2$ - $C_6$ -alkynyloxy,  $C_1$ - $C_6$ -alkylthio,  $C_2$ - $C_6$ -alkenylthio,  $C_2$ - $C_6$ -alkynylthio,  $C_1$ - $C_6$ -alkylamino, di( $C_1$ - $C_6$ -alkyl)amino,  $C_2$ - $C_6$ -alkenylamino,  $C_2$ - $C_6$ -alkynylamino,  $C_1$ - $C_6$ -hydroxyalkyl, hydroxycarbonyl- $C_1$ - $C_4$ -alkyl,  $C_1$ - $C_6$ -alkoxycarbonyl- $C_1$ - $C_4$ -alkyl, formyl- $C_1$ - $C_4$ -alkyl, formyl- $C_1$ - $C_4$ -alkoxy,  $C_1$ - $C_6$ -alkylcarbonyl- $C_1$ - $C_4$ -alkoxy,  $C_3$ - $C_6$ -cycloalkyl, which is bonded directly or via an oxygen, sulfur or  $C_1$ - $C_6$ -alkyl linkage, and  $C_5$ - $C_8$ -cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; or

Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
 Page 5 of 18

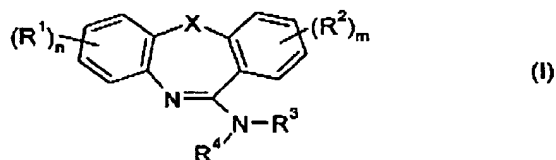
phenyl or benzyl which may be substituted by halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-haloalkyl; or  
 R<sup>3</sup> and R<sup>4</sup> together form the chains -(CH<sub>2</sub>)<sub>2</sub>N<sup>+</sup>(O<sup>-</sup>)(CH<sub>2</sub>)<sub>2</sub>- or  
 -(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(O<sup>-</sup>)(CH<sub>2</sub>)<sub>2</sub>-;

m is 0, 1, 2, 3 or 4;

n is 0, 1, 2, 3 or 4;

or the enantiomers or diastereomers, salts or esters thereof.

**Claim 11 (Currently amended):** A method for protecting growing plants from attack or infestation by insects, arachnids or nematodes comprising contacting a plant, or soil or water in which the plant is growing, with a pesticidally effective amount of at least one compound of formula I or a composition comprising at least one compound of formula I:



wherein

X is sulfur, oxygen, sulfinyl (S=O), sulfonyl (SO<sub>2</sub>), NR<sup>a</sup>, or CR<sup>b</sup>R<sup>c</sup>;

R<sup>a</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, or C<sub>2</sub>-C<sub>6</sub>-alkynyl, wherein the carbon atoms in these groups may be substituted by 1 to 3 groups R<sup>#</sup> wherein

R<sup>#</sup> is halogen, cyano, nitro, hydroxy, mercapto, amino, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonylamino, carboxyl, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>2</sub>-C<sub>6</sub>-

Application No.: 10/539,643  
Amdt. Dated: April 28, 2006  
Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
Page 6 of 18

alkynyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, or C<sub>1</sub>-C<sub>6</sub>-alkylthio;

phenyl or benzyl, each unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3 C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-haloalkylthio, C<sub>1</sub>-C<sub>6</sub>-alkoxy or C<sub>1</sub>-C<sub>6</sub>-haloalkoxy groups;

R<sup>b</sup>, R<sup>c</sup> are each independently hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-~~alkynyl~~ ~~alkenyl~~, C<sub>1</sub>-C<sub>6</sub>-hydroxyalkyl, wherein the carbon atoms in these groups may be substituted by 1 to 3 groups R<sup>#</sup>, or

phenyl, unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3 C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy or C<sub>1</sub>-C<sub>6</sub>-haloalkoxy groups, or

CR<sup>b</sup>R<sup>c</sup> represents C=O or C=CR<sup>j</sup>R<sup>k</sup>, wherein R<sup>j</sup> and R<sup>k</sup> each independently are hydrogen, halogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, or C<sub>3</sub>-C<sub>6</sub>-cycloalkyl;

R<sup>1</sup>, R<sup>2</sup> are each independently halogen, hydroxy, mercapto, amino, cyano, nitro, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)amino, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkenyloxy, C<sub>2</sub>-C<sub>6</sub>-alkenylamino, C<sub>2</sub>-C<sub>6</sub>-alkenylthio, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynylamino, C<sub>2</sub>-C<sub>6</sub>-alkynylthio, C<sub>1</sub>-C<sub>6</sub>-alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>-alkylsulfoxyl, C<sub>2</sub>-C<sub>6</sub>-alkenylsulfonyl, C<sub>2</sub>-C<sub>6</sub>-alkynylsulfoxyl, formyl, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, hydroxycarbonyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl, carbonyloxy, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyloxy, phenyloxy, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonylamino, C(O)NR<sup>d</sup>R<sup>e</sup>, or (SO<sub>2</sub>)NR<sup>d</sup>R<sup>e</sup>, wherein the carbon atoms in the aliphatic and aromatic groups may be substituted by 1 to 3 groups R<sup>#</sup> and wherein R<sup>d</sup> and R<sup>e</sup> are each independently groups as listed for R<sup>a</sup>; or

C(=NOR<sup>f</sup>)-G<sup>p</sup>-R<sup>f</sup>, wherein R<sup>f</sup> and R<sup>f</sup> are each independently hydrogen or C<sub>1</sub>-C<sub>6</sub>-alkyl, G is oxygen, sulfur or NR<sup>f</sup> and p is 0 or 1; or

a mono- or bicyclic 5- to 10-membered aromatic ring system which may contain 1 to 4 heteroatoms selected from oxygen, sulfur and nitrogen and which is

Application No.: 10/539,643  
Amdt. Dated: April 28, 2006  
Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
Page 7 of 18

unfused or fused to the aromatic group to which it is bonded and which, when unfused, is bonded directly or through an oxygen, sulfur, C<sub>1</sub>-C<sub>6</sub>-alkyl, or C<sub>1</sub>-C<sub>6</sub>-alkoxy linkage, and which is unsubstituted or substituted with any combination of 1 to 5 groups R<sup>#</sup>; or

C<sub>3</sub>-C<sub>12</sub>-cycloalkyl, which is bonded directly or through an oxygen, sulfur or C<sub>1</sub>-C<sub>6</sub>-alkyl linkage, and which is unsubstituted or substituted with any combination of 1 to 5 groups R<sup>#</sup>;

R<sup>3</sup>, R<sup>4</sup> are each independently hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkylamino, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, wherein the carbon atoms in these groups may be substituted with any combination of 1 to 3 groups R<sup>#</sup>, or C(O)R<sup>g</sup>, C(O)NR<sup>h</sup>R<sup>i</sup>, or C(S)NR<sup>h</sup>R<sup>i</sup>,

R<sup>g</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, or

phenyl or benzyl, each unsubstituted or substituted with any combination of 1 to 5 halogen, 1 to 3 C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>1</sub>-C<sub>6</sub>-haloalkylthio, C<sub>1</sub>-C<sub>6</sub>-alkoxy or C<sub>1</sub>-C<sub>6</sub>-haloalkoxy groups;

R<sup>h</sup>, R<sup>i</sup> are each independently groups as listed for R<sup>g</sup>;

or R<sup>3</sup> and R<sup>4</sup> together with the nitrogen atom to which they are attached form a saturated or partially saturated mono- or bicyclic 5- to 10-membered ringsystem containing 1 to 3 heteroatoms selected from nitrogen and oxygen or 5-membered heteraryl containing 1 to 4 nitrogen atoms, wherein the carbon and/or nitrogen atoms in the saturated, partially saturated or aromatic rings are unsubstituted or substituted with any combination of 1 to 4 groups selected from amino, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>2</sub>-C<sub>6</sub>-alkenyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>1</sub>-C<sub>6</sub>-alkylthio, C<sub>2</sub>-C<sub>6</sub>-alkenylthio, C<sub>2</sub>-C<sub>6</sub>-alkynylthio, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)amino, C<sub>2</sub>-C<sub>6</sub>-alkenylamino, C<sub>2</sub>-C<sub>6</sub>-alkynylamino, C<sub>1</sub>-C<sub>6</sub>-hydroxyalkyl, hydroxycarbonyl-C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl-C<sub>1</sub>-C<sub>4</sub>-

Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
 Page 8 of 18

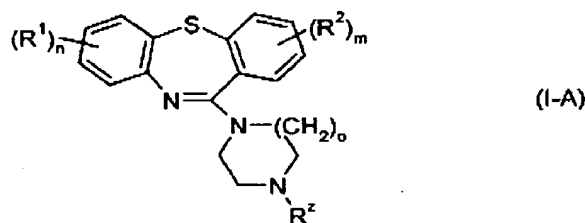
alkyl, formyl-C<sub>1</sub>-C<sub>4</sub>-alkyl, formyl-C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl-C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>3</sub>-C<sub>6</sub>-cycloalkyl, which is bonded directly or via an oxygen, sulfur or C<sub>1</sub>-C<sub>6</sub>-alkyl linkage, and C<sub>5</sub>-C<sub>8</sub>-cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; or phenyl or benzyl which may be substituted by halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-haloalkyl; or R<sup>3</sup> and R<sup>4</sup> together form the chains -(CH<sub>2</sub>)<sub>2</sub>N<sup>+</sup>(O<sup>-</sup>)(CH<sub>2</sub>)<sub>2</sub>- or -(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(O<sup>-</sup>)(CH<sub>2</sub>)<sub>2</sub>-;

m is 0, 1, 2, 3 or 4;

n is 0, 1, 2, 3 or 4;

or the enantiomers or diastereomers, salts or esters thereof.

Claim 12 (Currently amended): Compounds of formula I-A



wherein

R<sup>1</sup>, R<sup>2</sup> are each independently halogen, hydroxy, mercapto, amino, cyano, nitro, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>1</sub>-C<sub>6</sub>-alkylamino, di(C<sub>1</sub>-C<sub>6</sub>-alkyl)amino, C<sub>1</sub>-C<sub>8</sub>-alkylthio, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkenyloxy, C<sub>2</sub>-C<sub>6</sub>-alkenylamino, C<sub>2</sub>-C<sub>6</sub>-alkenylthio, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynylamino, C<sub>2</sub>-C<sub>6</sub>-alkynylthio, C<sub>1</sub>-C<sub>6</sub>-alkylsulfonyl, C<sub>2</sub>-C<sub>6</sub>-alkenylsulfonyl, formyl, or C<sub>1</sub>-C<sub>6</sub>-alkylcarbonyl, wherein the carbon atoms in the aliphatic and aromatic groups may be substituted by 1 to 3 groups selected from halogen, cyano, nitro, hydroxy, mercapto, amino, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-alkoxy, C<sub>2</sub>-C<sub>6</sub>-alkenyloxy, C<sub>2</sub>-C<sub>6</sub>-alkynyloxy, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, or C<sub>1</sub>-C<sub>6</sub>-alkylthio;

Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASP.10039 (PF 54175)  
 Page 9 of 18

$R^z$  is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl,  $C_1$ - $C_6$ -hydroxyalkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, or  $C_5$ - $C_8$ -cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; and wherein the group  $[N-R^z]$  may be present as amine oxide  $[N^+(O^-)-R^z]$ ;

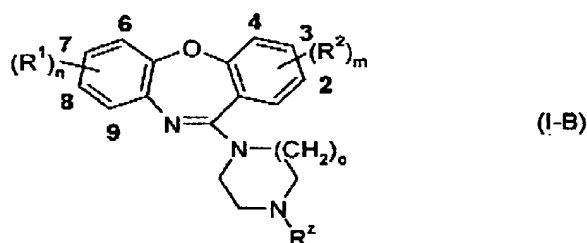
m is 1, 2, 3, or 4;

n is 1, 2, 3, or 4; and

o is 1 or 2.

Claim 13 (Previously Presented): Compounds of formula I-A according to claim 12 wherein  $R^1$  and  $R^2$  each independently are halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl, methoxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_8$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_2$ - $C_6$ -alkenylthio, or  $C_2$ - $C_6$ -alkynylthio.

Claim 14 (Previously Presented): Compounds of formula I-B



wherein

$R^z$  is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl,  $C_1$ - $C_6$ -hydroxyalkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, or  $C_5$ - $C_8$ -cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; and wherein the group  $[N-R^z]$  may be present as amine oxide  $[N^+(O^-)-R^z]$ ;

m is 1, 2, 3, or 4;

n is 1, 2, 3, or 4; and

o is 1 or 2

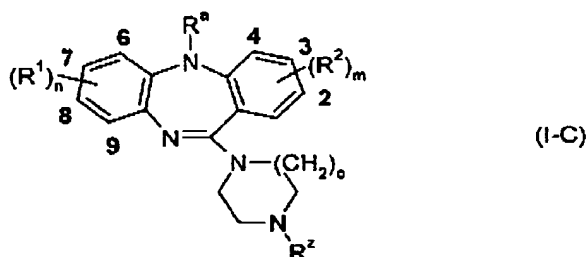


Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
 Page 10 of 18

and  $R^1$  and  $R^2$  each independently are halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl, methoxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_8$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_2$ - $C_6$ -alkenylthio, or  $C_2$ - $C_6$ -alkynylthio, with the proviso that  
 when  $R^1$  is 2-chloro then  $R^2$  is not 8-chloro or 8-methoxy; and  
 when  $R^1$  is 4-chloro then  $R^2$  is not 8-chloro; and  
 when  $R^1$  is 4-methyl then  $R^2$  is not 7-, 8-, or 9-chloro.

Claim 15 (Previously Presented): Compounds of formula I-C



wherein  $R^a$  is hydrogen or  $C_1$ - $C_6$ -alkyl and

$R^z$  is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl,  $C_1$ - $C_6$ -hydroxyalkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, or  $C_5$ - $C_8$ -cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; and wherein the group  $[N-R^z]$  may be present as amine oxide  $[N^+(O^-)-R^z]$ ;

m is 1, 2, 3, or 4;

n is 1, 2, 3, or 4; and

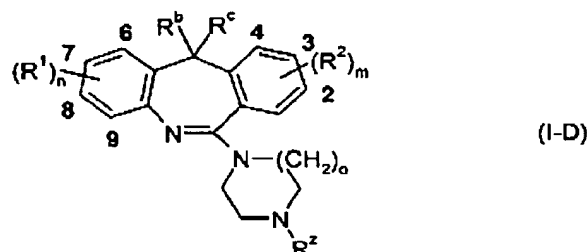
o is 1 or 2

and  $R^1$  and  $R^2$  each independently are halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl, methoxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_8$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_2$ - $C_6$ -alkenylthio, or  $C_2$ - $C_6$ -alkynylthio, with the proviso that  
 not both of  $R^1$  or  $R^2$  are halogen and  
 when  $R^1$  is 2-chloro then  $R^2$  is not 8-methyl, 8-methylthio, or 8-methoxy; and  
 when  $R^1$  is 2-methoxy, then  $R^2$  is not 8-chloro; and  
 when  $R^1$  is 2-methyl then  $R^2$  is not 8-chloro.

Application No.: 10/539,643  
 Amdt. Dated: April 28, 2006  
 Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
 Page 11 of 18

Claim 16 (Previously Presented): Compounds of formula I-D



wherein  $R^b$  and  $R^c$  are each independently hydrogen, methyl or  $CR^bR^c$  represents  $C=CH_2$ , and

$R^z$  is hydrogen,  $C_1$ - $C_6$ -alkyl,  $C_2$ - $C_6$ -alkenyl,  $C_2$ - $C_6$ -alkynyl,  $C_1$ - $C_6$ -hydroxyalkyl,  $C_3$ - $C_6$ -cycloalkyl,  $C_3$ - $C_6$ -cycloalkyl- $C_1$ - $C_6$ -alkyl, or  $C_5$ - $C_8$ -cycloalkenyl, wherein the carbon atoms in these aliphatic groups can be substituted by 1 to 4 groups selected from halogen, cyano, hydroxy and nitro; and wherein the group  $[N-R^z]$  may be present as amine oxide  $[N^+(O^-)-R^z]$ ;

$m$  is 1, 2, 3, or 4;

$n$  is 1, 2, 3, or 4; and

$o$  is 1 or 2

and  $R^1$  and  $R^2$  each independently are halogen,  $C_1$ - $C_6$ -alkyl,  $C_1$ - $C_6$ -haloalkyl, methoxy,  $C_1$ - $C_6$ -haloalkoxy,  $C_1$ - $C_8$ -alkylthio,  $C_1$ - $C_6$ -haloalkylthio,  $C_2$ - $C_6$ -alkenylthio, or  $C_2$ - $C_6$ -alkynylthio.

Claim 17 (Previously Presented): Compositions comprising at least one compound of formula I-A as defined in claim 12 or an enantiomer or diastereomer, salt or ester thereof and an agronomically acceptable carrier.

Claim 18 (Previously Presented): Compositions comprising at least one compound of formula I-A as defined in claim 13 or an enantiomer or diastereomer, salt or ester thereof and an agronomically acceptable carrier.

Application No.: 10/539,643  
Amdt. Dated: April 28, 2006  
Reply to Office Action Dated: January 31, 2006

Attorney Docket No. BASF.10039 (PF 54175)  
Page 12 of 18

**Claim 19 (Previously Presented):** Compositions comprising at least one compound of formula I-B as defined in claim 14 or an enantiomer or diastereomer, salt or ester thereof and an agronomically acceptable carrier.

**Claim 20 (Previously Presented):** Compositions comprising at least one compound of formula I-C as defined in claim 15 or an enantiomer or diastereomer, salt or ester thereof and an agronomically acceptable carrier.

**Claim 21 (Previously Presented):** Compositions comprising at least one compound of formula I-D as defined in claim 16 or an enantiomer or diastereomer, salt or ester thereof and an agronomically acceptable carrier.